

442nd Signal Battalion - 25E ESM COURSE

Last Updated: 30 March 2016

Course Title: Electromagnetic Spectrum Manager (ESM) Course

Course Number: 4C-SI5D/201-25E30

Company: Charlie Company

College: Leader College for Network Operations (LCNO)

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Division: Information Communications Telecommunications Defense (ICTD)

Status Change Date: July 2012

Training site: USASCoE&FG, Fort Gordon, GA

Length: Phase 11 weeks, 424 Academic Hours

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Managed: Army Training Requirements and Resources System (ATRRS)

Prerequisites: None

PURPOSE:

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Electromagnetic spectrum operations (EMSO) provide the resource necessary for the implementation of the wireless portion of net-centric warfare. Understanding the operational process in planning, managing, and employing this resource is critical to the conduct of all warfighting functions. This chapter provides an introduction to EMSO, its importance during military operations, and the electromagnetic spectrum operations management process.

COURSE SCOPE:

The electromagnetic spectrum management course provides students with a foundation based in theory and doctrine to facilitate the training required to perform spectrum management operations at the Brigade Combat Team (BCT) level. The following subject areas are covered during the course: introduction to communication electronics principles, radio wave propagation theory, communication systems engineering, electromagnetic compatibility, Army-unique automated radio frequency engineering and assignment programs, International and US regulations, coordination channels and frequency request formats, electronic warfare cell operations, and BCT organization as it relates to spectrum management. Students also receive hands-on training on the Automated Communications Engineering Software (ACES)/Joint Automated Communications Software (JACS), SPECTRUM XXI, and the System Planning Engineering and Engineering Device (SPEED).

COURSE STRUCTURE:

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This course is structured in phases, modules and lessons as provided

a. Narrative Description: The 4C-SI5D/201-25E30 Electromagnetic course consists of the following modules: Spectrum Management Mathematics and Physics, Communications Electronics Theory, Spectrum Management Policies and Administration, Spectrum Planning and Engineering, Electronic Warfare, Automated Communications Engineering Software (ACES)/Joint Automated Communications Software (JACS), SPECTRUM XXI, Spectrum Engineering and Evaluation Device (SPEED), Spectrum Management Conference, and Administrative Time.

b. A listing of all lessons by modules.b. A listing of all lessons by modules.

MODULES:

- **Module A:** Spectrum Management Mathematics and Physics (*39 Academic Hours*)
- **Module B:** Communications Electronics Theory(*39 Academic Hours*)
- **Module C:** Spectrum Management(*35 Academic Hours*)
- **Module D:** Spectrum Planning and Engineering(*53,5 Academic Hours*)
- **Module E:** Electronic Warfare (EW) (*40 Academic Hours*)
- **Module F:** ACES/JACS(*78.5 Academic Hours*)
- **Module G:** SPECTRUM XXI(*82 Academic Hours*)
- **Module H:** Spectrum Engineering and Evaluation Device (SPEED) (*24 Academic Hours*)
- **Module I:** Spectrum Management Conference and Capstone Exercise
- **Module J:** Administrative Time(*100.5 Administrative Hours*)

For website updates, contact:

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